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Understanding Sustainable Development Goal (SDG) 4 on “quality education” from micro, meso and macro perspectives

Ellen Boeren¹

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Abstract

This article discusses the current focus of education policies around the world on working with benchmarks, indicators and targets. Its aim is to increase knowledge of potential strategies to meet the fourth United Nations Sustainable Development Goal (SDG 4), which strives for quality education. The SDGs form part of the United Nations (UN) “2030 Agenda for Sustainable Development”, which was unanimously adopted in 2015 by all UN Member States as a “plan of action for people, planet and prosperity”. Structure and agency theory form an important starting point of this article, allowing the ten targets within SDG 4 to be separated and viewed from micro-, meso- and macro-level perspectives. This analysis explores the idea that reaching the SDG 4 targets is a responsibility shared among individuals, education and training institutions, and regulating governments.

Keywords Lifelong learning · Quality education · Sustainable Development Goals (SDGs) · Comparative education

Résumé

Comprendre l’Objectif 4 de développement durable (ODD) concernant une « éducation de qualité » des points de vue micro, meso et macro – Le présent article analyse l’accent mis actuellement au niveau mondial dans les politiques éducatives sur l’application de normes de référence, d’indicateurs et de cibles. L’auteure entend diffuser les connaissances sur les stratégies potentielles qui permettent d’atteindre le quatrième Objectif de développement durable (ODD 4) énoncé par les Nations Unies et visant une éducation de qualité. Les ODD font partie de « l’Agenda 2030 pour le développement durable », adopté à l’unanimité en 2015 par tous les États membres des Nations Unies (ONU) à titre de « plan d’action concrète en faveur de l’humanité, de la planète et de la prospérité ». La théorie sur la structure et l’agentivité forme un pilier central de cet article, car elle permet de séparer et d’aborder les dix cibles de l’ODD 4 sous l’angle des niveaux micro, meso et macro. Cette analyse explore l’idée que l’atteinte des cibles de l’ODD 4 constitue une responsabilité partagée entre

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individus, institutions d'éducation et de formation, et gouvernements en charge de la réglementation.

Introduction

This article explores the specific targets within the fourth United Nations Sustainable Development Goal (SDG 4) on “quality education” (WEF 2016) from micro-, meso- and macro-level perspectives.¹ Its aim is to explore the complexity of raising educational quality around the world, suggesting the need for multiple actors to cooperate closely (Boeren 2016). The article draws on *structure and agency* approaches (see e.g. Giddens 1984; Bourdieu 1984)² to offer deeper insight into the roles that individuals, education and training institutions, stakeholders and regulating governments may play in achieving the specified education targets by 2030.

The article opens with a brief overview of the United Nations Sustainable Development Goals, followed by a discussion of the current global education policy climate, which is strongly oriented towards various benchmarks, indicators and targets (see Ozga 2012). A separate section focuses on structure and agency approaches, underlining their contribution to educational change. Building further on this line of thought, the ten specific SDG 4 targets on “quality education” are broken down and approached from micro-, meso- and macro-level perspectives, mapping insights from structure and agency approaches onto each of the ten targets. The article concludes with some critical notes and suggestions for further discussion, both for policy, practice and future research.

The Sustainable Development Goals

The United Nations Sustainable Development Goals (SDGs) are not the first set of goals designed to help nations work together to create a cleaner planet and more just global society. The previous agenda's Millennium Development Goals (MDGs) were formulated in 2000 and included eight goals to be achieved by 2015: (1) to eradicate extreme poverty and hunger; (2) to achieve universal primary education; (3) to promote gender equality and empower women; (4) to reduce child mortality; (5) to improve maternal health; (6) to combat HIV/AIDS, malaria, and other diseases; (7) to ensure environmental sustainability; and (8) to develop a global partnership for development (UN 2000; Gabay 2015).

On 1 January 2016, an ambitious new plan was launched, which increased the number of goals from eight to seventeen: (1) to eradicate poverty; (2) to end hunger; (3) to ensure health and well-being for all; (4) to ensure quality education

¹ As will become clear in the course of this article, *micro* refers to an individual level; *meso* refers to group level and *macro* refers to government level.

² The concept of structure and agency is interested in the structure of social reality and the extent to which individuals are free to act within that structure.

for all; (5) to achieve gender equality; (6) to ensure clean water and sanitation; (7) to ensure affordable and clean energy; (8) to promote decent work and sustainable economic growth; (9) to build resilient and sustainable industry, innovation and infrastructure; (10) to reduce inequalities; (11) to build sustainable cities and communities; (12) to ensure sustainable consumption and production; (13) to take climate action; (14) to protect life below water; (15) to protect life on land; (16) to promote peace, justice and inclusive institutions; and (17) to strengthen the Global Partnership for Sustainable Development (Palmer 2015). The 17 goals address themes of “economic growth, social development [and] environmental protection” (UN 2015, item 9.) and are further specified in 169 targets. While the MDGs mainly targeted developing countries, the SDGs focus on all countries across the globe.

In 2017, UNESCO published *Education for Sustainable Development Goals: Learning Objectives* (UNESCO 2017a). This publication draws a distinction between cognitive, socio-emotional and behavioural learning objectives for all SDGs, refers to the knowledge and skills needed to fulfil these aims, the motivation and attitudes that can underpin them, and the actions needed to achieve them. In the present article, the focus is on SDG 4, which contains 10 specific targets, addressing the needs of children, youth and adults. The idea of “lifelong learning for all” is a key element of SDG 4.

While “quality education” is a goal in itself, it is important to avoid regarding the 17 SDGs as fragmented “work packages”. Many of the goals can, in fact, be interpreted as correlating with each other. For example, research on the benefits of educational attainment shows that those with higher skills levels tend to secure better-paid jobs, enjoy better health, be more involved in their communities, and practise more active citizenship (see Schuller et al. 2004; McMahon 2010; Psacharopoulos and Patrinos 2018). We also know that there is a correlation between education participation rates and governmental investment in industries, innovation and infrastructures (Groenez et al. 2007; Blossfeld et al. 2014). This suggests that education can act as a powerful “engine” to develop a more cohesive and equal society. Nowadays, educators also pay attention to gender equality (SDG 5), for example through initiatives to encourage more girls and women to enter the fields of Science, Technology, Engineering and Mathematics (STEM) (see Panetta and Williams 2018). A highly qualified workforce is a demonstrated driver of decent work and strong economic growth (SDG 8) (see Woessmann 2016; Frey 2017), which in turn contribute to achieving the goals on poverty (SDG 1) and hunger (SDG 2). Quality education can also include increasing skills in relation to learning for sustainability, such as care for our planet (SDGs 12 and 13). The final goal, SDG 17, focuses on the role of partnerships in order to reach the SDGs and makes explicit reference to the need for governments to work together and cooperate with a wide range of stakeholders in the private and non-profit sectors. Education, however, is not mentioned at all in the discussion of SDG 17. This goes against the research evidence on the benefits of education and training, which touch on the domains of all the other SDGs, both at the level of the individual and of society. Further understanding the possibilities for individuals, educational institutions, relevant stakeholders and governments to work together to achieve both SGG 4 and the other Goals might thus increase knowledge

of potential routes to progress. This article focuses on what these different players can contribute in relation to the ten specific targets of SDG 4 on quality education.

Benchmarks, indicators and targets

The meaning of the SDG 4 targets on quality education – and, in fact, of the SDGs in general – is related here to the current discourse on education policy, which is strongly oriented towards various benchmarks, indicators and targets (Ozga 2012; Cardoso and Steiner-Khamsi 2017). Jenny Ozga labels this approach “governance by numbers” (Ozga 2012). Besides the United Nations, other international organisations have also influenced education policymaking through the collection, monitoring and publication of statistics supporting a pre-defined set of targets. The European Commission publishes annual monitoring reports as part of its strategic framework entitled “Education and Training 2020”, for which it formulated a set of benchmarks to be achieved by 2020 (see European Commission 2017). These relate to the areas of (1) early school leaving; (2) higher education completion; (3) basic skills; (4) early childhood education; (5) lifelong learning; (6) transition to the labour market; and (7) mobility between countries. The Organisation for Economic Co-operation and Development (OECD) publishes an annual *Education at a Glance* report, providing statistics on the current state of education around the world, but mainly concentrated on OECD countries – those belonging to the “club of rich nations”. The OECD presents data on (a) the output of educational institutions and the impact of learning; (b) financial and human resources invested in education; (c) access to education, participation and progression; and (d) the learning environment and organisation of schools (see for example OECD 2017). In preparing these reports, the OECD draws on evidence from its own surveys, notably the Programme for International Student Assessment (PISA), which collected data on skills of 15-year-old pupils; the Programme for International Assessment of Adult Skills (PIAAC), which collected skills data from adults aged 16–65; and the Teaching and Learning International Survey (TALIS), a survey of teachers and school leaders. PISA, in particular, has gained prominence in education policy debates across the globe, influencing education reforms in numerous countries (see Carvalho and Costa 2015).

It is important to note that the current global approach to education policymaking has met with plenty of criticism (see Johansson 2016; Hamilton 2017; Fischman et al. 2018). One of the core aims of monitoring progress towards the achievement of benchmarks, indicators and targets is to exert pressure on countries to belong among the top global performers. This may then lead to naming, shaming and blaming those who are seen to be “underperforming”, with the expectation that this will lead to them “beefing up their game”³ (Ball 2012; Lingard and Lewis 2016). However, this approach may place unhealthy pressure on learners themselves. It has also been criticised by Stephen Ball (2012) and Bob Lingard and Steven Lewis (2016) as

³ The idiomatic expression of “beefing something up” refers to strengthening something by giving more substance to it; the expression is somewhat similar to “revamping” something to improve its image.

not providing enough contextual information to the readers of these reports. Countries may score high on a certain measure, but this is likely to be the result of a wide range of factors. Examples include educational and socio-political history, the operationalisation of schools and training institutions, and the financial investment governments have been willing to make in the education and upskilling of their populations (Boeren 2016). This is also known to correlate with the characteristics of the labour market, which will be further explored below.

In policy terms, the current discourse might lead to policy-copying behaviour, aiming for a “quick fix” of broken education systems, with no real guarantee of a long-term solution (Phillips and Ochs 2003; Auld and Morris 2014; Nir et al. 2018). Instead, these authors argue, the focus should be on countries’ learning from each other through understanding how systems are embedded in the wider economic, social, cultural and political context. In particular, targets related to student achievement and participation have been criticised for placing too strong an emphasis on the responsibility of the individual in the neo-liberal education marketplace (Ball 2012). Instead, the scholars I have cited suggest striving towards workable alternatives in which policymakers and educational providers actively interact with learners, perceiving education as a shared responsibility.

For the remainder of this article, I will focus on micro-, meso- and macro-level perspectives, specifically referring to the role of (1) individuals and their families (the micro level); (2) schools, education and training initiatives (the meso level); and (3) regulating governments (the macro level). The three perspectives will be used as a tool to further understand and unpack the ten SDG 4 targets on quality education. First, I will explore the interrelations between human agency and the existing structures and systems in which people have to live and work, underpinning my discussion with scholarly insights from leading theorists in this area, for example Giddens and Bourdieu. Second, I will discuss the ten targets of the SDG 4 from micro-, meso-, and macro-level perspectives.

Micro-, meso-, and macro-level perspectives on education

The current human global population is approaching 8 billion (UN DESA 2017). It is important to understand that each of these individual agents lives within a structured environment which is defined by its own rules and resources. Thus, to understand the complex reality of social issues, including education, it is not enough to draw on individual (micro-level) or structural (macro-level) perspectives (Boeren 2016). A combined approach is recommended. This way of thinking recalls Anthony Giddens’ *structuration theory*, which aims to understand the relationship between individuals and the structures around them (Giddens 1984). Similar lines of thoughts have been developed by Pierre Bourdieu (1984), whose work concentrated on the power struggles between people from varying social classes leading to socially constrained behaviour, with a stronger focus on the role of groups and classes compared to the role of the individual agent in Giddens’ work. The bottom line of their work on structure and agency approaches is that the individual and society are interdependent, and thus both perspectives should ideally be included in

research. This allows for the consideration of critical perspectives that go beyond the level of the individual.

Similar ways of thinking have been applied by educationists, for example based on Urie Bronfenbrenner's *ecological systems theory*, in which individuals are embedded in their own micro-level system consisting of their peers and family, but surrounded by additional meso-, exo-⁴ and macrosystems (Bronfenbrenner 1979). In adult education, Kjell Rubenson and Richard Desjardins' *bounded agency model* draws on the idea that decisions to participate in adult education activities are bounded by structural elements, commonly influenced by the type of welfare state regime the adults live in (Rubenson and Desjardins 2009). Rudolf Tippelt and Aiga von Hippel (2010) also distinguished between micro, meso and macro levels in focusing on decisions to participate in further education, as did I (Boeren 2016) in my comprehensive lifelong learning participation model, indicating that participation can be theorised as an interplay between an individual's social and behavioural characteristics, the availability and structures of education and training providers, and the role of supporting governments.

The micro level

Parents, children, young adults and adult learners are key players at the micro level in education because they are the ones who appear in participation statistics, they are the most relevant actors in a policy discourse underpinned by benchmarks and indicators, and they are expected to obtain a high level of knowledge and skills to operate within the global economy (Boeren 2016). However, not everyone has similar chances in life to be successful in education, and research has shown that broad differences exist depending on families' socio-economic and socio-demographic characteristics (see Bukodi and Goldthorpe 2011; Marks 2013). Children with highly educated parents are much more likely to attend university and participate in further education and training in later life. Their parents are also more likely to have the financial and human resources to send them to good schools (see Green et al. 2017). As adults, they are more likely to be employed in highly skilled jobs and to receive generous employer support for their personal development, compared to peers who are less qualified and confined to less skilled jobs (Boeren 2016). From a young age, children with highly educated parents have more opportunities to develop a middle-class lifestyle, based on distinct values and tastes, often explained through the notion of *habitus* (see Bourdieu 1984; Wacquant 2004).⁵ A strong socio-economic background and the advantages this offers for education also appears to correlate with certain psychological attributes, as explained by Carolynne Mason

⁴ Bronfenbrenner's *exosystem* in his work on children refers to elements in a child's environment which indirectly affect that child's development.

⁵ Bourdieu's concept of "habitus" refers to a person's unreflected (unconscious) compliance with inherent, unwritten "rules" of conduct within that person's cultural sphere based on his/her cultural capital, which includes norms of what is considered good in terms of manners, taste etc. he/she internalised while growing up within that particular cultural sphere.

et al. (2011). Families in which several members achieved success in the past tend to be more knowledgeable of how the “system” works, are more confident in navigating it, and have experienced the benefits education can bring in terms of well-paid knowledge-intensive jobs (see Reay 2015). This understanding of the benefits of education can act as a stimulus for parents to invest in their children’s education. It helps them develop a positive attitude towards education, and these future potential benefits drive motivation to do well in school and in other education and training contexts. In sum, micro-level attributes in educational research commonly refer to socio-demographic and socio-economic factors, people’s attitudes, confidence, interests, and motivation to learn.

The meso level

A separate meso level is also relevant to education. Learning processes can take place in a variety of settings, including nurseries, schools, colleges, universities and workplaces. The availability of high-quality learning settings is vital for good educational outcomes, as argued by Helen O’Sullivan and John West-Burnham (2011). These need to employ high-quality teachers, educators, managers and support staff who are able to cater to their learners’ needs and who receive opportunities for their own professional development. Ideally, educational institutions have the autonomy to make decisions about staff development (see Aoki and Schroeder 2014). Education and training institutions also need to be located close to learners and their parents with good transport accessibility. They are also more likely to gain the confidence of learners if they present a strong vision and genuinely deliver the best learning opportunities they can. Without this interaction between the micro and the meso levels, it is unlikely that high-quality learning will take place. However, the meso level is not always considered in education research, as I have argued elsewhere (Boeren 2011). Reports on benchmarks and indicators published by the European Commission and the OECD offer comparisons between countries at the macro level, but provide few insights into the specific role of the educational institutions. These institutions are, in fact, a meso-level tool for translating education policies into learning processes in which the individual micro-level agent takes part. As such, it is necessary to consider them in educational research. According to Tippelt and von Hippel (2010), three components characterise the meso level: the structure of the educational offers available in the institution; the ways in which learning and pedagogical practices are organised; and the qualification levels of staff members.

The macro level

Despite the importance of the meso level, schools and training institutions need to undertake their practice in relation to a range of rules and legislations. Countries – or devolved regions – have their own education policies which training institutions need to follow. Examples include the need to follow a set of requirements in order to grant standardised and officially recognised qualifications, or – in the case of public universities – to receive funding (Lauder 2011). This means that education and

training institutions often do not enjoy full autonomy in how they operate (see Aoki and Schroeder 2014). As such, the interaction between meso and macro levels is also important. In fact, the macro level can be extended to other domains of social policy. Active labour market policies can influence the provision of training programmes for the unemployed and of strong technical and vocational education, as discussed by Steven Groenez et al. (2007) and Hans-Peter Blossfeld et al. (2014). Research by these scholars has also shown that countries with higher levels of democracy, political trust and social justice tend to have stronger levels of education participation among adults. In short, macro-level factors tend to relate to legal and financial rules and regulations, the overarching educational systems in place in a country or devolved region, and the socio-political ideologies of the country or region.

While discussing the role of micro, meso and macro factors in making education more efficient and effective for all, it is important to note that most of the large-scale work in this area has been undertaken in the Western world. The OECD, for example, has reported extensively on individual and country-level differences in relation to literacy, numeracy and problem-solving skills in OECD and affiliated countries. The OECD's new PISA for Development project⁶ will release data on the skills and knowledge of 15-year-old students in developing countries and prompt further debates on the quality of education in the selected countries (see Addey 2017). The World Bank has undertaken the Skills Toward Employment and Productivity (STEP) survey in a range of developing countries, measuring adult skills standardised to PIAAC measures (World Bank n.d.; Fischman et al. 2018). UNESCO's Literacy Assessment and Monitoring Programme (LAMP) survey also measures literacy skills in a limited number of developing countries (UNESCO 2017b). The available evidence suggests that the universal implementation of primary education has not yet been achieved. For example, the goals set by UNESCO's Education for All (EFA) strategy for the period 2000–2015 (WEF 2000) were not achieved in any of the sub-Saharan countries (Kuwonu 2015). This is alarming indeed and suggests the need for more detailed investigations into the exact reasons why these countries failed to reach the goals (Groce and Bakhshi 2011; Wagner 2014). In general, most studies of the interaction between micro, meso and macro levels in influencing education policies come from Western scholarly literature.

Ten SDG targets: micro-, meso- and macro- level perspectives

Table 1 lists the ten SDG 4 targets. Each of these has been broken down based on the different roles to be fulfilled by players at the micro, meso and macro levels. It is important for these levels to cooperate and support each other, an idea underpinned by structure and agency approaches. The reason for breaking the targets down into different perspectives is to increase knowledge of underlying actions that might help in reaching the targets.

⁶ For more information about the new PISA for Development project, visit <http://www.oecd.org/pisa/pisa-for-development/> [accessed 7 February 2019].

Table 1 Breakdown of the SDG 4 targets into micro-, meso- and macro-level perspectives

MICRO level	MESO level	MACRO level
<p>1. “By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes” (SDG 4.1)</p> <p>Parents recognising the importance of education and sending their children to school</p>	<p>Availability of high-quality primary and secondary schools</p>	<p>Adequate funding for education by responsible governments; focus on compulsory schooling laws</p>
<p>2. “By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education” (SDG 4.2)</p> <p>Parents sending children to preschool and making use of care provisions; parents recognising the importance of these activities</p>	<p>Availability of high-quality preschool and childcare initiatives; making parents aware of the existence and accessibility of these services in the local community</p>	<p>Adequate funding for preschool and childcare provision by responsible governments; campaigns on benefits of preschool initiatives to raise awareness among parents</p>
<p>3. “By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university” (SDG 4.3)</p> <p>Men and women completing earlier tracks of education and moving on to more advanced tracks; men and women recognising the benefits of continuing their education</p>	<p>Availability of affordable and quality technical, vocational and tertiary education, including university</p>	<p>Adequate funding for affordable and quality technical, vocational and tertiary education by responsible governments; cultural shift towards perceiving education as making a positive contribution to society</p>
<p>4. “By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship” (SDG 4.4)</p> <p>Youth and adults having a positive attitude and strong motivation to maintain their skills throughout life</p>	<p>Local employers investing in skills development for their employees; availability of education and training institutions specialising in technical and vocational education</p>	<p>High-level job creation by responsible governments; schemes to encourage employers to invest in their employees; introduction or maintenance of active labour market policies, including skills training</p>
<p>5. “By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations” (SDG 4.5)</p> <p>All people having the confidence they can be successful in education, regardless of their personal characteristics or background</p>	<p>Making local education and training initiatives accessible by catering to the needs of vulnerable groups; attracting staff qualified to deal with groups with special needs</p>	<p>Adequate funding for schools and training institutions catering for the needs of vulnerable groups; provision of training for teachers working with vulnerable learners</p>

Table 1 (continued)

MICRO level	MESO level	MACRO level
6. “By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy” (SDG 4.6)		
Parents promoting literacy and numeracy of their children from a young age, e.g. by reading bedtime stories and going to the library	Education and training institutions promoting literacy and numeracy throughout the entire curriculum; availability of literacy and numeracy initiatives for adults in the local community	Integrating literacy and numeracy evaluations in quality control mechanisms for compulsory education; adequate funding for adult education and training institutions offering literacy and numeracy courses
7. “By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture’s contribution to sustainable development” (SDG 4.7)		
Parents introducing values relating to sustainable development to their children from a young age	Education and training institutions adopting a cross-course approach to themes of sustainable development; providing intra- and extra-mural activities focusing on sustainable development	Governments making sustainable development a core part of the compulsory education system and providing adequate funding for this; governments conducting campaigns to sensitise adults to themes of sustainable development
8. “Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all” (SDG 4.A)		
Parents interacting with schools to demand optimal learning environments for their children: adults working with education and training institutions to focus on creating efficient and effective learning environments	Management and staff of education and training institutions increasing their knowledge of how to optimise learning environments; management and staff implementing changes to produce optimal learning environments	Governments making adequate investments in the infrastructure of education and training institutions, as well as investing in continuing professional development of teachers in relation to disabilities, safety, inclusive and effective education
9. “By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries” SDG 4.B)		
People recognising the importance of education and striving towards its enshrinement as a right in their countries	Availability of high-quality and accessible higher education institutions in these countries; raising awareness of these institutions and what they offer	Countries in the developed world recognising the importance of foreign aid to developing countries; governments maintaining quality-control systems for education and training systems that meet international standards

Table 1 (continued)

MICRO level	MESO level	MACRO level
10. “By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing states” (SDG 4.C)		
Young adults developing the motivation to work as teachers	Availability of high-quality teacher training institutions to fulfil the needs of developing countries	Governments investing in international teacher training schemes, including placements and jobs

At the micro level, it is important that individuals understand the importance of education and training, linked to the potential benefits these can generate, as discussed above. In relation to SDG 4.1 and SDG 4.2, it can be argued that parents across the world need to develop a positive attitude towards education and understand the benefits it can bring to their children, increasing their own levels of agency, which are typically bounded by the structures in which they live. This may help them at later stages of life, when they want to continue their educational pathways into vocational or tertiary education (SDG 4.3) and successfully transition into the labour market (SDG 4.4). These actions could then draw on the attitudes, confidence and motivation they have built up earlier in life. This might also be important when they become parents themselves, and will be responsible for sending their own children to school. Parents can also play an important role at the micro level through introducing literacy practices at home (SDG 4.6), a common example of what Bourdieu identified as the habitus of middle-class people to develop higher levels of literacy and work with schools to build the highest-quality educational infrastructure for their children (SDG 4.A). Having the confidence to do well in the education system, as explained above, tends to be important for everyone, but especially for those who have traditionally missed out, for example people in vulnerable positions (SDG 4.5), but also those living in developing countries and parts of the world in which education systems still have much room to improve (SDG 4.B and SDG 4.C).

All of this can, of course, only occur if there is high availability of quality education and training provisions, a recurrent theme at meso level throughout the SDG 4 targets, and part of the structure and agency idea. Ideally, as mentioned above, provision should be available at a commutable distance from each individual's home. Educational institutions are also likely to be more successful if they manage to attract high-quality staff and educators, engage in effective and efficient educational management, stay on top of their finances and reach out to local communities to make their educational offers known. This is likely to be important in relation to pre-primary (SDG 4.2), primary, secondary (SDG 4.1) and tertiary education (SDG 4.3). In order to reach the SDG targets, it is important for educational institutions to diversify their education offerings, including vocational and technical skills programmes (SDG 4.3, SDG 4.4 and SDG 4.5). Research (Boeren et al. 2017) has shown that countries with low participation rates in adult learning tend to have limited high-quality provision available. Educational managers need to work with staff in their own institutions to focus on inclusion, a common theme throughout the SDG 4 targets. More work will inevitably need to be done in developing countries to offer the highest quality of education (SDG 4.9 and SDG 4.10).

The ways in which educational offerings need to be implemented at the meso level are likely to vary in different regions of the world. For example, based on global education monitoring, we know that access to primary education in Western Europe is close to 100 per cent, but this is much weaker in parts of the developing world (UNESCO 2017b). Differences in relation to state-of-the-art education and training institutions at the meso level thus also relate to developments at the macro level, again a core idea of structure and agency approaches in education. In countries that have not achieved high levels of participation in primary and secondary education, governments should thus, for example, explore changing their policies on the duration of compulsory education

(SDG 4.1). Moreover, ensuring sufficient funding to invest in education is essential and a common theme across all SDG 4 targets. In relation to SDG 4.4, it might be useful for governments to invest in job creation and a healthy labour market, as adults will only receive chances to maintain and utilise their high-level skills if the job market provides them with opportunities to do so, as discussed above based on evidence by Groenez et al. (2007) and Blossfeld et al. (2014). For countries in the developed world, it will also be important to recognise the importance of investing in foreign aid in order to close the economic and social gaps between developed and developing countries (SDG 4.9 and SDG 4.10).

Recommendations for policy, practice and research

Evidence – mainly from the Western world – teaches us that participation in education and high levels of educational attainment correlate with a wide range of indicators concerning good health, well-being, active citizenship and employment as discussed earlier in this article (see Schuller and Desjardins 2007). The implementation and maintenance of high-quality education systems across the globe is therefore highly recommended. However, there are still huge differences in how countries approach education. Children, teenagers and adults in low- or middle-income countries tend to have less access to high-quality education, as evidenced by UNESCO’s Global Education Monitoring Reports (e.g. UNESCO 2017b). Having explored the 10 SDG 4 targets, reflecting separately on the micro-, meso- and macro-level perspectives, a number of overarching suggestions for further discussions among researchers, policymakers and practitioners can be formulated.

Raise awareness of benefits of learning among citizens and policymakers

The benefits of participating in high-quality education can be both monetary and non-monetary, and occur at the individual and societal levels. It is understandable that policymakers in developing countries might not perceive investing in certain types of education as a top priority, as they may struggle to ensure sufficient food resources and drinkable water for all citizens. However, it is important not to view education goals as isolated targets, but in interaction with the other Sustainable Development Goals, as outlined in SDG 17. Many of the targets may be easier to reach when strong and accessible systems of education and training are put in place, leading to stronger knowledge-based infrastructures, despite education not being explicitly mentioned in relation to the outreach goals in SDG 17. Poverty and literacy problems are often transferred between generations. Access to education may play a role in reducing these social inequalities, notwithstanding the frequent charge that education reproduces middle-class values, as outlined by Bourdieu.

Put better quality monitoring systems in place

As discussed above, reliable data on educational indicators are not equally available across countries. Micro-level datasets containing information on skills' assessments of children, teenagers and adults are available for most Western countries, but only for a limited number of developing countries. In relation to education and training for adults, PIAAC and the Eurostat Adult Education Survey (AES) provide individual-level data. Information for developing countries, for example presented in the *Global Reports on Adult Learning and Education* (GRALE 1–3) (UIL 2009, 2013, 2016), is based on country-level surveys, and thus gathers data at macro level, asking a limited number of people to provide answers to a set of questions. It is therefore harder to estimate the reliability and validity of these data. While the current policy discourse around benchmarks and indicators has warranted plenty of criticism, as discussed above, this does not automatically mean that high-quality data cannot be helpful in further understanding the educational landscape. For example, a globally harmonised longitudinal dataset on education participation and outcomes might help both researchers and policymakers to gain better insights into the evolution of peoples' lives and to make stronger claims about the benefits of education and lifelong learning, relying on causation rather than mere correlation. Nowadays, large amounts of data are available, not only about our lives, but also about the countries and regions we live in, but much of these data are fragmented. Might linking these together further increase our insights into what is happening? While this is an argument for further discussion, bringing data together also comes with its own ethical implications and might be hard to achieve in reality.

Bring education and training opportunities to the people

Only 46 per cent of teenagers in rural sub-Saharan Africa have completed primary school, as reported in the 2017/18 *Global Monitoring Report on Education* (UNESCO 2017b). This is a common problem in low- and lower-middle-income countries. However, this location effect is also visible in other parts of the world. From the literature on higher and adult education, we know that most educational provision is available in urban areas (Boeren et al. 2017). For example, cities and larger towns tend to have at least one university as well as an adult education centre. If it is difficult for people to access education and training initiatives, one of the possible solutions might be to bring education to the people. Examples include mobile schools, or, given reliable internet infrastructure, distance learning opportunities. More insight in how effective these practices have been in the past might be helpful.

Provide high-quality teacher training across the world

The meso level is often neglected in education research (Boeren 2016). However, teachers are vital players in the education arena. They facilitate learning by children, teenagers and adults and put education policies into practice. Seen from a structure

and agency perspective, teachers act as vital bridge builders between society and individual agents. The SDGs call for inclusive and accessible education for all, but this might be difficult to attain if teachers are unaware of how to achieve this through their own work. As outlined in the tenth target (SDG 4.C), there is a pressing need for teachers in the developing world, so an increased debate on this topic would be welcome.

Build partnerships with other relevant stakeholders

The observation that education policies are embedded in a wider range of social policies, including health, employment and social security, has been discussed above, underpinned by scholarly work by, for example, Groenez et al. (2007) and Blossfeld et al. (2014). At the level of practice, this means that cooperation between a wide range of stakeholders should be encouraged. Health workers might not be aware of adult education offers available in their area, but are likely to see a wide range of people in their daily work who would profit from participation. In developed countries, we see that employment services often have their own training programmes to help people escape situations of poverty and unemployment, although such active labour market policies differ in strength and effectiveness (see Boeren et al. 2017). SDG 17, as mentioned above, focuses on partnerships, but not explicitly in relation to education. What do we currently know about partnerships for increasing educational quality across the globe? What is the effectiveness of the work done by, for example, NGOs like Doctors without Borders, The Education Trust and Oxfam? The role of successful partnerships might be deepened and, if relevant, there might be a focus on raising awareness of the role of education in relation to SDG 17.

To conclude, this article has explored the ten SDG 4 targets using a structure and agency approach, distinguishing between micro-, meso- and macro-level aspects. By breaking the targets down, I have demonstrated that reaching indicators, benchmarks or targets – the dominant approach in current global education policymaking – is a rather complex task. By undertaking this exercise, this article aims to stimulate debate on the shared responsibilities of individuals, education and training institutions and regulating governments in order to reach the SDGs by 2030.

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